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IN THIS ISSUE

The Sanitary Engineering Program of UNRRA

Pathology of Rickettsialpox

Notifiable Diseases, Third Quarter, 1947

CONTENTS

	Page
Contributions of the sanitary engineering program of UNRRA to international health. Frederick F. Aldridge	1729
A report on the histopathology of the cutaneous lesions of a case of rickettsialpox. Lloyd R. Hershberger and Robert J. Huebner	1740
INCIDENCE OF DISEASE	
United States:	
Reports from States for week ended November 22, 1947, and comparison with former years	1743
Weekly reports from cities:	
City reports for week ended November 15, 1947	1747
Rates, by geographic divisions, for a group of selected cities	1749
Plague infection in Modoc County, Calif	1749
Foreign reports:	
Canada—Provinces—Communicable diseases—Week ended November 1, 1947	1750
Jamaica—Notifiable diseases—5 weeks ended November 1, 1947	1750
Reports of cholera, plague, smallpox, typhus fever, and yellow fever received during the current week—	
Plague	1751
Smallpox	1751
Typhus fever	1751
Deaths during week ended November 15, 1947	1751
Notifiable diseases, third quarter, 1947	1752

Public Health Reports

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CONTRIBUTIONS OF THE SANITARY ENGINEERING PROGRAM OF UNRRA TO INTERNATIONAL HEALTH

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The sanitary engineering program of UNRRA (1944–46) was made possible through the full-time assignment of sanitary engineering personnel by the United States Public Health Service. In the early and developing phases of UNRRA's operations, the sanitation officers were all from the United States Public Health Service. During the peaks of UNRRA's activities in the various parts of the world (November 1944–July 1946), 52 of the 65 sanitary engineering personnel on duty with UNRRA were commissioned officers of the United States Public Health Service. The remaining sanitary engineering personnel comprised United States civilians and sanitary engineers from the United Kingdom, Brazil, Dominican Republic, Haiti, Mexico and Greece.

The signing of the Constitution of the new World Health Organization on July 22, 1946, was the first step in setting up an international agency concerned with all phases of public health. The organization will be concerned not only with the checking of epidemics and the application of quarantine measures, but will take steps to eradicate disease and promote health by preventive methods. Since the prevention of disease is considered the first objective of this new agency, the role of the sanitary engineer can be a very important one, especially in the control of insect, water, and food-borne diseases. The contributions of the United Nations Relief and Rehabilitation Administration in international health have been significant and a tribute to sanitary engineering.

Sanitary engineering is construed to mean the application of engineering principles in the prevention of disease and the promotion of health through the control of environmental factors (water, food and milk supplies, waste disposal, insect carriers, housing, and drainage).

[1] Appointed Public Health Engineer and Director of the Division of Sanitation, Seattle Department of Public Health, Seattle, Washington, Feb. 14, 1947.

Under the auspices of the Office of Foreign Relief and Rehabilitation Organization and later, the United Nations Relief and Rehabilitation Administration, there was developed for the first time a world-wide sanitary engineering program. Valuable contributions were made to the health of victims of World War II.

ORGANIZATION

In the administrative framework of UNRRA, the Bureau of Services was directly responsible to the Director General and consisted of the Division of Health, the Division of Welfare and the Division of Displaced Persons. Included in the Health Division were the following branches: Field Operations, Far East, Epidemic Disease Control, Nursing, Sanitary Engineering, Medical and Sanitation Supplies and Employee Health Services.

While in the beginning the headquarters' work was devoted to the planning and operational activities in Europe, administrative responsibility for the health work of UNRRA throughout Europe and the Middle East was decentralized and placed under the European Regional Office in London, which in turn delegated responsibility to the country missions. Each mission had its individual Health Division with a Sanitary Engineering Branch. Headquarters became more concerned with broad policies affecting the over-all operations and was later responsible for actual operations only in the Far East. Contact with all field operations, however, was maintained through periodic reports supplemented by personal inspection tours by headquarters' representatives.

UNRRA's sanitary engineers have served as consultants, teachers, and assistants in preventing epidemics in the liberated countries receiving UNRRA aid; as directors of sanitation services in displaced persons camps; and as liaison officers in paying countries. By means of these functions, UNRRA's sanitary engineers have contributed to the prevention of disease—a critical world problem which can be met only by an international organization equipped to combat pestilence and improve general public health conditions. UNRRA's contribution consisted not only in the quantity of sanitation supplies which have been shipped and distributed, but also in the determination of disease-prevention needs and the supervision of preventive services.

SPECIFIC PROBLEMS AND ACCOMPLISHMENTS

Certain specific problems and difficulties were encountered in connection with UNRRA's sanitary engineering programs. In most cases, the working conditions challenged one's training and inventive ability. The customary equipment and supplies usually were not available, making it necessary to improvise and utilize local materials

and personnel. The highlights of these difficulties and how they were met, are presented here briefly.

Middle East.—In February 1944, the first health teams of the Office of Foreign Relief and Rehabilitation Organization, later absorbed by UNRRA, arrived in Cairo to work in the refugee camps of Egypt, Palestine and Syria. In this group were two sanitary engineers. The engineering personnel was gradually expanded to 24. The initial plans called for setting up sanitary facilities in the Middle East camps, and for giving practical training to sanitary engineering recruits for future assignment to country missions of the Balkan area.

The sanitary conditions of the desert camps were deplorable. No sanitation supplies or equipment were available in the El Shatt camp of Egypt which housed 30,000 Yugoslav refugees. Many of the refugees and camp staff were afflicted with bacillary or amebic dysentery. The source of infection was traced to the local kitchen workers who had no conception of proper sanitation. Dishes and kitchen utensils were never washed, but merely stacked on the floor and rinsed in a haphazard manner. The kitchen workers, most of whom had active diarrhea, had no facilities for hand washing after visiting the latrine. Hand and dish washing facilities were provided. The dish washing consisted of a soap wash, rinse, sterilization in 200 p. p. m. hypochlorite solution and air-drying in open racks. The lack of training of the kitchen workers in even elementary hygienic measures made it impossible to teach them how to use the facilities. Eventually it was found necessary to discharge them and substitute refugee women. A short time after the inauguration of proper kitchen sanitation the dysentery rate was greatly reduced, and dropped to nil among the UNRRA staff.

Nuseirat, the Greek refugee camp near Gaza, Palestine, housing nearly 10,000 refugees, reported a high incidence of amebic dysentery. The source of infection was traced to the fresh vegetables bought by refugees from the natives. In this whole area, human excreta were used for fertilizing vegetable gardens. The refugees were advised to cook all vegetables before consumption. However, it soon became apparent that it was impossible to stop them from buying and eating uncooked vegetables. Upon the recommendation of the camp sanitary engineer, a central canteen was set up by the camp staff to buy all fresh vegetables and fruits from the natives and sell them to the refugees at cost. Within this canteen, all vegetables and fruits were immersed in a 200 p. p. m. hypochlorite solution for one-half hour and then rinsed in clear water to remove the chlorine taste. This operation brought about a substantial reduction in the number of reported dysentery cases.

The provision of safe water required constant supervision. In Egypt, the camps were supplied from a nearby British Army installa-

tion. The treatment consisted of alum coagulation, rapid sand filtration, and chloramine sterilization, providing residuals of 0.2 p. p. m. at the ends of the water distribution system. After treatment, the water was pumped to standpipes in the camp areas, from which it flowed by gravity to the taps. The source of water was a heavily polluted irrigation canal from the Nile River. Bacteriological tests of the treated water showed it to be safe for human consumption. In Palestine, the water was supplied from a well-water system installed by the Australian troops who had previously used the location as a military camp. Treatment consisted of hypochlorite dosing at 1 p. p. m. Except for a slight saline taste in the water, which contained 550 p. p. m. chloride measured as chlorine, no harmful results or disease were reported from its use.

Waste disposal was as important as the provision of safe water. The excreta-disposal facilities consisted of squat-type pits and bucket latrines. In the case of the bucket latrines, night soil was emptied by Arab contractors into closed metal carts and the contents were buried in the desert outside of the camp area. Kitchen and laundry waste water was directed through grease traps to leaching pits. Refuse, including garbage, was collected in metal bins covered with a creosote-treated burlap weighted down by metal hoops. This method was found to be very effective in keeping flies from access to the bins. The refuse and garbage were collected by local contractors in horse-drawn wooden carts and buried in the desert outside the camp area. The depository, as in the case of the excreta from bucket latrines, was sprayed with waste oil and provided with at least a 2-foot earth covering.

Fly control consisted of the use of Burton-type fly traps, baited with meat scraps, placed near kitchens and latrines, and the spraying of the latrine contents daily with a 2 percent cresol solution. Later on, 5 percent DDT solutions in kerosene were used with much better results.

For disinfestation, refugees to the camps were given soap showers. Their clothing and bedding were subjected to steam disinfestation in Serbian barrels and mobile Thresh steam units. When DDT became available, this procedure was abandoned and the refugees, as well as their personal effects and bedding, were dusted with a 10 percent DDT powder.

Malaria and mosquito control consisted of canalization of nearby swamp areas in Palestine, and larviciding with a 5 percent solution of DDT in kerosene.

The primary purpose of the camp sanitation program was to train the refugees to handle their own sanitation problems. A training course was instituted in all the camps and selected refugees became understudies to trained UNRRA workers, with a gradual increase in

their responsibilities until only over-all supervision of a sanitary engineer was needed.

In some camps, the fouling of latrine interiors by improper usage was solved by assigning latrine attendants. As a result, the latrines were kept clean and all users were made to obey the simple rules.

Greece.—In November 1944, shortly after the Germans had left Greece, UNRRA's sanitary engineers were sent in to work with the Allied Military Liaison group. The devastation and filth left by the retreating Germans was tremendous. In Salonika, for example, 2,000 tons of garbage and refuse littered the streets. Every possible means of transportation had been driven away by the retreating enemy. Anti-tank trenches were used in disposing of some of the refuse on the spot, and the remainder was carted away in military trucks to appropriate dumps outside of the city limits.

A typhus fever epidemic seemed almost inevitable in view of the concentration of large groups of louse-infested people in prisons, hospitals and refugee areas. Scattered cases of louse-borne typhus were being reported. The sanitary engineers trained local health teams in delousing by dusting with 10 percent DDT powder. The systematic delousing with DDT and periodic DDT dusting of all persons in contact with the sick and of their premises helped prevent an epidemic.

The hospitals in Greece were in a deplorable state as a result of the civil war and the use of these buildings as fortresses. There had been severe damage to the buildings and their sanitary facilities. There were no windows, few doors, a lack of drinking water, and general infestation with lice and fleas. The engineers were responsible for having the buildings repaired and put into habitable condition. Water and other sanitary facilities were provided. In some cases, it was necessary to drill wells to provide a safe supply of water. General disinfestation with DDT solved the insect problem.

Malaria, the scourge of Greece for decades, received first priority in the sanitary engineering program. In addition to the old methods of malarial mosquito control, such as screening of houses, draining and filling of swamps, and larviciding with paris green and oils, an all-out attack was waged against malaria. The old methods were supplemented by the use of DDT for adult and larval control. DDT was utilized as follows:

1. Residual spraying of all houses and stables in malarious areas for adult control. A 5 percent DDT solution was applied to interior surfaces at the rate of 40 cc. per square meter, giving a residual of 2 grams DDT per square meter.
2. DDT thermal aerosol spraying of swamps with specially equipped PT–17 Stearman biplanes. A 20 percent solution of DDT in Velsicol NR–70 was applied at the rate of 0.1 lb. of DDT per acre of water surface (112 grams per hectare). Seventeen planes have been used in this phase of the operations for larval control. The training of native pilots and airplane mechanics was a part of the program.

3. Hand spraying with 5 percent DDT kerosene solutions and water emulsions, at the rate of 0.1 lb. DDT per acre, of all breeding areas in which airplane spraying was not practical.

During 1946, despite the fact that the anti-malaria program was greatly handicapped by the lack of adequate supplies and transportation, a considerable lowering of the malaria rate in Greece has been reported. In order of effectiveness, the malaria control methods are summarized as follows:

1. DDT residual spraying of all houses and diurnal resting places in endemic areas.
2. DDT hand spraying, searching out and treating the small isolated breeding places.
3. Airplane larviciding with DDT of the large lakes and swamps where hand control methods are impossible.

Approximately 300,000 houses and stables have been sprayed with DDT. Although tabulation of malaria rates for evaluation purposes is not complete, there has been enthusiastic acclaim from the populace as a whole, due to the almost complete absence of flies, bedbugs, fleas, and lice. In connection with the residual spraying of stables and barns, it has also been reported that cattle are in better health and cows give more milk because they are relatively free from biting insects.

Approximately 280,000 acres of mosquito-breeding water surface areas have been treated by airplane with a total consumption of 18,000 gallons of 20-percent DDT solution.

Miscellaneous reports from DDT-sprayed areas in Greece are scientifically of little value. They do, however, show that the results are very impressive, not only in the lower incidence of malaria, but of other insect-borne diseases as well. The operated areas have been so free of flies during the summer months that it is reasonable to expect a substantial decrease in the mortality and incidence rates from infantile enteric diseases.

In the other fields of sanitation, the main problems have been: the provision of safe water; adequate drainage; disposal of excreta; disposal of garbage; and rat eradication.

In rat eradication, very successful results were obtained with the use of the new poison "1080," sodium fluoroacetate, in water solution. The use of "1080" has greatly reduced the risk of rat-borne diseases and the destruction of food materials by rats. The action of this poison as a rodenticide has been almost as significant as DDT as an insecticide. The Greeks have been thoroughly instructed in its use and warned of its hazards to other animals and especially to humans.

Italy.—The sanitary engineering program in Italy has been concentrated for the most part on malaria control, with some work in port sanitation and disinfestation in hospitals and institutions. Public water supply and waste disposal problems in general have been under the supervision of the military authorities.

The malaria control work carried on under UNRRA's supervision has consisted chiefly of DDT residual spraying to kill adult mosquitoes. The summary of malaria control work shows a totally-controlled area of 1,890 square miles; population directly benefited, 595,000; number of rooms treated, 490,000; and total wall surface treated, 303,500,000 square feet.

Although the official figures were not complete, there had been no reported primary cases of malaria in the areas treated with DDT residual spraying up to July 1946. In control areas not treated, the number of primary cases reported up to the same date was comparable to the number reported the previous year before the program was started. In 1945, the total number of reported cases of malaria in Italy was 350,000.

The malaria control program has been confined almost exclusively to the use of DDT to kill adult mosquitoes, with little or no larviciding work being done. Therefore, as the final results become known and the DDT residual spraying has proved its effectiveness, it may be possible to offer evidence that only DDT residual spraying of houses and stables need be considered in a modern malaria control program. It is believed that nearly all potentially-infected mosquitoes which come to rest on DDT-treated surfaces are killed. Thus the chain of transmission is broken. It has already been proven that residual spraying is the most practical and least expensive of modern malaria control methods.

An outbreak of bubonic plague in the port of Taranto was reported during the last quarter of 1945. It was quickly controlled by the combined efforts of the Allied Commission, Italian civil and military authorities, British experts, and UNRRA sanitation personnel. The outbreak began early in September. Twenty-eight cases with 14 deaths were reported.

UNRRA sanitation supplies included DDT for the dusting of the population of Taranto and a truck for hauling equipment for cyaniding the ships. A comprehensive scheme for the destruction of rats in the city and port of Taranto was put into operation. The Italian health authorities also gave close attention to the enforcement of port shipping and quarantine regulations in other cities. No further outbreaks have occurred.

Training in the techniques of disinfesting hospitals and public institutions with DDT has been carried on by the UNRRA sanitation officers. A large number of institutions, including hospitals and jails, have been deloused with UNRRA sanitation materials.

Yugoslavia.—UNRRA's sanitary engineering program in Yugoslavia has been less on an operational basis than those carried on in either Greece or Italy. The main contribution has been by means of surveys, consultation, recommended procedures for disease preven-

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tion, and the expedition of the necessary supplies and equipment. A great deal of emphasis has been placed on the rehabilitation of the water, sewerage and refuse disposal facilities, as well as the bolstering of governmental sanitary services and the training of sanitary engineers in local universities.

UNRRA's sanitary engineers have been most successful in recommending programs and procuring the necessary equipment and materials to carry on wide-scale malaria and typhus control.

The chief sanitary engineer of the Yugoslav Government was granted a fellowship for 2 months of refresher training in the United States. He visited the leading universities in eastern United States, as well as Federal, State, and local health departments.

Poland.—The need for sanitary engineering services in Poland became evident when a large number of typhoid and typhus fever cases was reported. The program included surveys, recommendations and provisions of materials and equipment for the prevention and control of water, food, and insect-borne diseases. A comprehensive study of the milk situation was carried on.

The sanitary engineers in Poland have been most instrumental in drawing up plans for future sanitary engineering training in the universities of Poland, and the bolstering of the present sanitary engineering services of the government.

Albania.—UNRRA's sanitary engineering operations in Albania were confined for the most part to malaria control. A program for DDT residual spraying of houses and stables and airplane larviciding of swamp areas was introduced. The training of native pilots and airplane mechanics was a part of the program. The results of this work are not yet known.

China.—The China program was the last of the UNRRA projects to get under way. The basic need for sanitation and sanitary engineering measures in China was even more apparent than in the other countries.

The first contribution was the assignment of two sanitary engineers, as part of an UNRRA team, to help check the cholera epidemic in the Chungking area in the summer of 1945. The chlorination of the public water supplies, although not complete, was probably one of the factors which brought the epidemic to an end.

The most notable of other diseases of sanitary significance in China were malaria, typhoid, the dysenteries, typhus, and plague, all of which are endemic.

The sanitary engineering personnel with the Chinese health officials and engineers have set up control procedures in most of the regions. In cooperation with the Chinese engineers, UNRRA's sanitary engineers made studies of DDT solvents available, in order to

find out the most practicable method of utilizing local materials for the residual spraying of houses for malaria control.

In some of the bombed-out cities, water-distribution systems were badly damaged. All the chlorine was put in the water mains at the treatment plant. By the time the water reached the ultimate consumer, it was unsafe due to sewage pollution en route. There was similar destruction to the sewerage systems. The immediate problem was the repair and restoration of the water and sewerage systems, with adequate chlorine sterilization in the case of the waterworks.

A serious potential for the spread of communicable diseases was found in connection with the displaced persons in refugee centers. Every effort to maintain proper camp sanitation and prevent filth-borne diseases was adopted. The health training program in China included a course for sanitary engineers and medical officers given by one of UNRRA's sanitary engineers. UNRRA's sanitary engineers in most of the regions have made recommendations to put all the waterworks back into operating condition, since they had been neglected during the Japanese occupation. UNRRA's engineers have been training local personnel to combat insect-borne diseases, especially with the use of DDT. Special emphasis has been placed on the control of malaria in those regions where malaria is endemic. The city health administrations and the American and British Army medical personnel have been most helpful to UNRRA in these operations.

Since the use of human excreta as a fertilizer is vital to Chinese economy, safe methods for the utilization of human excreta, rather than disposal, are being investigated.

Ethiopia.—The health protection of the people of Ethiopia will depend largely upon adequate sanitation. At present, the country is almost devoid of indigenous medical and public health personnel.

UNRRA's sanitary engineer has inaugurated practical instruction courses for training Ethiopians in the basic principles of sanitation. This training includes practical projects and demonstrations. The provision of safe drinking water, the proper disposal of excreta, and insect-control measures are most important from the sanitary engineering point of view.

Germany and Austria.—The sanitary engineering work with the displaced persons in Germany and Austria was similar to the work carried on by UNRRA sanitary engineers in the Middle East refugee camps. The congregation of people always presents a specific health hazard, and if proper sanitation standards are inaugurated and maintained, the incidence of water, food, and filth-borne diseases will be greatly minimized.

SUMMARY OF FUNCTIONS

As the enemy were driven from the Balkan countries, and later from the mainland of Asia, the sanitary engineers of UNRRA moved from the Middle East refugee camps into Greece, and later additional engineers went to Italy, Yugoslavia, Austria, Germany (Displaced Persons camps), and China.

In the first stage, subject only to the over-all supervision of the chief medical officers of the UNRRA missions, the chief sanitary engineers and their staffs of regional sanitary engineers were responsible for inaugurating preventive measures to curb epidemics of water, food, and insect-borne diseases. After all possible emergency measures for curbing epidemics had been taken, the sanitary engineers dealt with the rehabilitation of existing sanitary facilities.

The over-all responsibilities of the sanitary engineers were as follows:

1. To give advisory assistance in the organization of sanitary engineering branches in national, regional, and local health departments, and to aid the local sanitary authorities.
2. To act as advisors and liaison officers to UNRRA Divisions other than Health in matters pertaining to sanitation.
3. To plan and conduct investigations and surveys to determine needs for sanitary personnel, equipment, and supplies.
4. To expedite the procurement and distribution of sanitary equipment and supplies, and to give consultatory service on their use.
5. To promote training programs for sanitation personnel and to take part in their technical direction.

Insofar as possible, in all national and regional areas, local sanitary engineers were designated to serve with UNRRA engineers as their deputies during the UNRRA period, and were trained to carry on by themselves upon UNRRA's termination. However, in conformity with UNRRA's over-all policy, the primary function of the sanitary engineer was to assist and advise.

The peaks of UNRRA's activities in the various countries were reached between November 1944 and July 1946. The following table shows the distribution of sanitary engineering personnel:

Distribution of Sanitary Engineering Personnel at the Peak of UNRRA's Activities

Location	*Number*	*Location*	*Number*
Headquarters (Washington, D. C.)	2	Egypt (El Shatt)	3
Albania	[1]3	Egypt (Moses Wells)	1
Austria (Displaced Persons Camps)	1	Egypt (Tolumbat)	1
China	18	Palestine (Nuseirat)	1
Ethiopia	1	Philippeville Camp (North Africa)	1
Germany (Displaced Persons Camps)	3	Poland	2
Greece	[1]15	Yugoslavia	5
Italy	8	SHAEF (on loan)	3
Middle East Camps (Cairo Headquarters)	1		

[1] Includes 1 Pilot and 1 Supervisor of Aircraft Maintenance.

CONCLUSIONS

From the experience of UNRRA's sanitary engineering efforts, it is apparent that any international organization which is concerned with promoting health on a long-term basis must give first consideration to the prevention of disease rather than the cure. The application of sanitary engineering principles should be one of the bases for prevention work in connection with water, food, and insect-borne diseases.

A properly administered sanitary engineering program can be an important factor in promoting health. By the maintenance of adequate precautionary measures, a great many of our most serious communicable diseases, such as the dysenteries, typhoid, cholera, malaria, typhus, and plague can be prevented, thus eliminating or minimizing the need for expensive treatment and hospitalization. The sanitary engineer is one of our strongest guardians of health, and his services should be utilized to the fullest extent wherever an engineering prevention and control program is indicated.

ACKNOWLEDGMENT

The author wishes to acknowledge the contributions of the entire sanitary engineering staff of UNRRA whose activities have been summarized in this paper.

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A REPORT ON THE HISTOPATHOLOGY OF THE CUTANEOUS LESIONS OF A CASE OF RICKETTSIALPOX[1]

By LLOYD R. HERSHBERGER, *Surgeon, and* ROBERT J. HUEBNER, *Senior Assistant Surgeon, United States Public Health Service*

During an investigation of the 1946 outbreak of rickettsialpox (*1*) (*2*) (*3*) (*4*) (*5*) (*6*), in New York City, biopsy specimens of the cutaneous lesions were obtained from one case. The patient (A. G.), a 34-year-old male, was a resident of a housing development in which more than 100 cases of rickettsialpox had occurred. The disease ran a typical clinical course and the diagnosis was confirmed serologically. At the time of the excision, the primary lesion had been present for at least 11 days and the rash for 3 days. For the sake of completeness, we have included clinical notes on this particular case, but the chief purpose of the paper is to present a description of the lesions present in the skin during the course of the disease.

CLINICAL NOTES

On July 15, 1946, while taking a shower, A. G. accidentally scratched and thereby noticed for the first time a "blind boil" on the posterior aspect of his left shoulder. On July 20, the symptoms of a "cold" began. Generalized aching, a chilly sensation, and a temperature of 101° were present. An intermittent fever, reaching 103° at times, characterized the course of the illness. On July 23 the patient noticed a few "spots" on his body. When seen by one of the authors on July 24, the initial lesion appeared as a bright red papule about 1.0 cm. in diameter surrounded by an erythematous area which increased the total diameter of the lesion to approximately 2.5 cm. The center of the papule had broken down and was crusted over.

Vesiculo-papular lesions were noted over the entire body; they were not numerous, however. The approximate range in diameter of these lesions was from 3 to 8 mm. The centrally located vesicles were deep seated and minute. On July 26 the patient was still febrile and confined to his bed. At this time the initial lesion, which had not changed appreciably in appearance, was excised. A small lesion located on the left arm was also removed.[2]

Defervescence of the disease occurred within several days and convalescent serum taken on August 4, 1946, gave a titer of 1–320 when tested by the complement fixation test with an antigen prepared with the M. K. strain of rickettsialpox. Except for cross fixation with Rocky Mountain spotted fever, this test has been found to be specific (*1*).

[1] From the Pathology Laboratory and the Division of Infectious Diseases, National Institute of Health, Bethesda, Maryland.

[2] We are indebted to Dr. Theodore Rosenthal of the New York City Health Department for performing the excisions, and to Dr. Benjamin Shankman, the attending physician, through whose courtesy we were enabled to obtain the specimens.

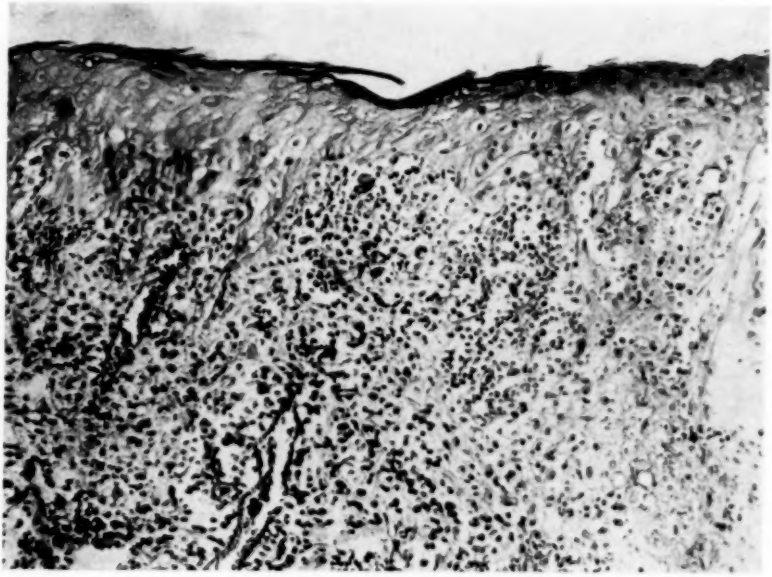

FIGURE 1.—The edge of the primary lesion. Partial necrosis and collapse of the epidermis is seen at the right. Dermal inflammatory changes and necrosis are prominent. (X 200)

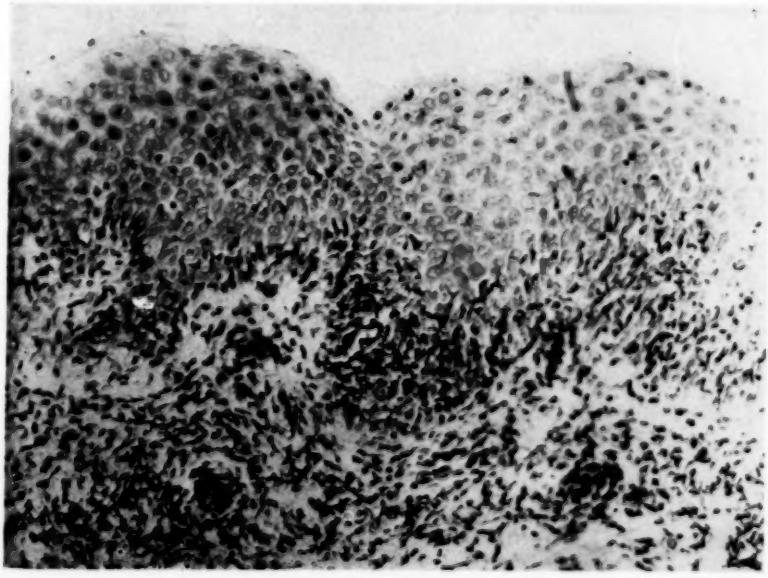

FIGURE 2.—The secondary lesion. The dermis and the deep portion of the epidermis show an inflammatory infiltrate. Two dermal capillaries are obliterated. (X 200)

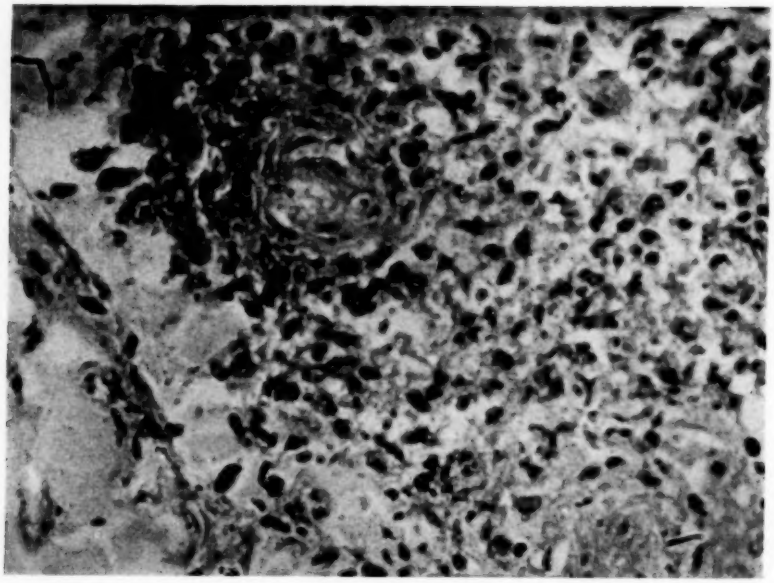

FIGURE 3.—Higher power view of a typical vascular lesion. A thrombus plugs the lumen. The perivascular inflammatory cells are necrotic and partially fragmented. (X 350)

Histopathology of the Primary Lesion.—The specimen consisted of an elliptical piece of skin 15 x 10 x 5 mm. in size, which near its center, presented a shallow ulcer about 5 mm. in diameter. A brown, friable crust covered the ulcer.

Microscopic examination showed a shallow ulcer about 5 mm. in diameter whose base was formed by the most superficial portion of the dermis. Laterally, the epithelium was essentially normal except immediately adjacent to the lesion where it showed slight intercellular edema in the prickle-cell layer. A surface exudate made up of fibrin, pyknotic nuclear fragments and degenerated epithelial cells was present. Under this exudate, the dermis showed a narrow zone of coagulation necrosis where many of the dermal connective tissue fibers were destroyed but enough still remained to give a reticulated pattern. A serosanguineous exudate was present in many of the spaces thus formed. Beneath this necrotic area, but not forming a sharp zone, dilated and blood-filled capillaries were moderately numerous. They were surrounded by a moderate number of lymphocytes and large mononuclear cells with an occasional plasma cell and neutrophil also present. Deeper in the dermis, patchy areas of similar inflammation were seen which usually included several capillaries. Within a single focus, a few capillaries showed necrosis of their walls and associated agglutinative thrombi made up of red blood cells and fibrin. Small hemorrhages and a few nuclear fragments were seen about the vessels most markedly damaged. The other capillaries in the same area usually showed only congestion. Mast cells with small evenly distributed granules were also present in variable numbers in close proximity to the blood vessels, but no rickettsia could be identified.

The hair follicles, arrectores pilorum, and sweat glands were usually surrounded by an inflammatory infiltrate similar to that seen about the capillaries. The hair follicles themselves were not infiltrated by inflammatory cells in contrast to the arrectores pilorum and the sweat glands, both of which were invaded. Actual interruption of the muscle had occurred in the arrectores pilorum due to foci of inflammation. The sweat glands were damaged to the greatest extent. In some of the coils, complete destruction of the epithelium had occurred due to coagulation necrosis, while in others, exfoliation of the epithelial cells was the extent of the damage. The intertubular connective tissue, in addition to the mononuclear inflammation previously described, showed a sprinkling of neutrophils, several small hemorrhages, and many nuclear fragments.

Beside the ulcer base, the dermal papillae were infiltrated by a moderate number of lymphocytes and large mononuclear cells which diffused down into the reticular layer. Dermal capillaries in general showed a perivascular inflammation similar to that described in the base of the ulcer but to a lesser degree.

Histopathology of the Secondary Lesion.—The specimen consisted of a piece of skin 7 x 5 x 5 mm. in size. After fixation, no gross lesion could be discerned.

Microscopic examination showed one focal area of epithelial thickening in an otherwise essentially normal epidermis. The lesion was characterized by a slight increase in the number of cells of the prickle layer but with a partial loss of the overlying stratum corneum. The cells of the deep one-third of the epidermis were separated by narrow clefts of which a few contained an oxyphilic serous exudate. In this same edematous area, pyknotic, polymorphous nuclei without stainable cytoplasm were seen in moderate numbers between the epithelial cells.

The vascular lesions of the dermis were similar in type to those described in the primary lesion, but they were fewer in number. Just below the epidermal lesion several capillaries showed necrosis of their walls, thrombosis, and obliteration. In other capillaries of the dermis, the vessel walls could scarcely be identified but they usually showed a small central thrombus surrounded by many mononuclear inflammatory cells and karyorrhectic nuclear fragments. Detailed examination again failed to show rickettsiae although perivascular mast cells with many small granules were again identified. The dermal connective tissue immediately under the edematous surface epithelium showed slightly increased oxyphilia and contained many pyknotic spindle-shaped nuclei and a few nuclear fragments.

Inflammatory changes were again seen about the skin appendages. The arrectores pilorum showed slight to moderate involvement by mononuclear inflammatory cells, both about and within the muscles. A few lymphocytes had infiltrated between the coils of the sweat glands but no epithelial necrosis had occurred. The only hair follicle in the sections showed a minimal perifollicular mononuclear cell infiltration.

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INCIDENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED NOVEMBER 22, 1947

Summary

Of the total of 229 cases of poliomyelitis reported for the current week (last week 256, 5-year median 174), 110 occurred in the 4 States reporting more than 11 cases each, as follows (last week's figures in parentheses): New York 31 (35), Ohio 29 (23), Idaho 24 (13), California 26 (17). Since March 15 (approximate average date of seasonal low incidence), 9,688 cases have been reported (same period last year 23,794, 5-year median 12,705), of which 9 States with totals for the period of more than 250 cases each reported approximately 62 percent, as follows (last year's corresponding figures in parentheses): Massachusetts 342 (347), New York 1,157 (1,357), New Jersey 288 (238), Pennsylvania 452 (261), Ohio 1,401 (668), Illinois 807 (2,452), Michigan 600 (1,003), Idaho 283 (49), California 656 (1,951).

Of the total of 2,167 cases of influenza (last week 2,162, 5-year median 2,404), 1,718 occurred in the 3 States (Virginia, South Carolina, and Texas), which have reported more than 80 percent of the total of 19,245 cases since July 26 (approximate average date of seasonal low incidence). For the corresponding period last year, the same States reported 15,384, approximately the same percentage, of the total of 18,969 cases.

Two cases of smallpox were reported for the week—1 each in South Dakota and West Virginia. One case of anthrax occurred, in Oklahoma, 4 cases of Rocky Mountain spotted fever, in North Carolina, and 10 cases of infectious encephalitis, in 7 States.

Cumulative figures since the first of the year are above the respective corresponding median expectancies for the dysenteries (combined), infectious encephalitis, Rocky Mountain spotted fever, tularemia, undulant fever, and (since September 27, average low incidence date), for whooping cough.

Deaths recorded for the week in 93 large cities of the United States totaled 9,212 as compared with 9,343 last week, 8,951 and 8,537, respectively, for the corresponding weeks of 1946 and 1945, and 8,537 for the 3-year (1944–46) median. For the year to date, the total is 430,544, as compared with 423,510 for the same period last year. For the same cities, infant deaths during the week totaled 645, as compared with 721 last week and a 3-year median of 566. The cumulative total is 34,529, as compared with 31,131 for the corresponding period last year.

Telegraphic morbidity reports from State health officers for the week ended Nov. 22, 1947, and comparison with corresponding week of 1946 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1942–46	Week ended—		Median 1942–46	Week ended—		Median 1942–46	Week ended—		Median 1942–46
	Nov. 22, 1947	Nov. 23, 1946		Nov. 22, 1947	Nov. 23, 1946		Nov. 22, 1947	Nov. 23, 1946		Nov. 22, 1947	Nov. 23, 1946	
NEW ENGLAND												
Maine	1	4	3				1	185	2	0	0	0
New Hampshire	0	0	0	4				56	5	0	0	1
Vermont	7	0	0				3	91	23	0	1	0
Massachusetts	5	12	6				39	190	158	2	1	4
Rhode Island	0	1	0				1	60	2	0	1	1
Connecticut	0	1	1		1	1	3	15	15	0	5	1
MIDDLE ATLANTIC												
New York	29	28	14	[1] 7	[1] 3	[1] 3	159	112	112	7	2	14
New Jersey	4	5	2	3	6	6	65	40	27	2	2	4
Pennsylvania	11	17	10	(2)	[2] 3	[2] 2	94	200	204	7	6	6
EAST NORTH CENTRAL												
Ohio	12	25	20	3	9	9	48	81	34	4	6	6
Indiana	20	18	14	7	5	4	6	9	9	1	2	2
Illinois	12	6	6	2	1	4	253	6	35	4	3	5
Michigan [3]	29	20	17	3	2	1	649	22	62	1	2	4
Wisconsin	1	9	1	9	7	19	70	58	38	1	1	1
WEST NORTH CENTRAL												
Minnesota	6	17	14	2			283	8	5	1	4	4
Iowa	1	4	5				17	11	11	0	2	0
Missouri	5	6	9	8	3	3	15	2	5	2	2	2
North Dakota	2	0	6				59	1	2	0	0	0
South Dakota	2	0	2				3	2	2	0	0	0
Nebraska	0	2	2	10	11	3	34	2	11	0	0	0
Kansas	3	7	7	34	1	1	5	10	10	0	4	1
SOUTH ATLANTIC												
Delaware	0	1	0				1		1	0	0	0
Maryland [3]	15	7	7	2	4	5	1	12	12	0	0	1
District of Columbia	2	0	0		1	1	5	1	2	1	0	0
Virginia	10	13	13	251	230	259	7	74	63	1	0	1
West Virginia	8	14	7	33	5	5	66	16	5	2	0	1
North Carolina	36	21	24			2	4	52	12	3	2	2
South Carolina	20	7	7	460	384	415	5	12	10	1	1	1
Georgia	19	4	19	6	20	26	10	49	3	0	2	0
Florida	12	12	8	3	2	2	5	6	6	0	1	1
EAST SOUTH CENTRAL												
Kentucky	3	16	10	1		1	1	25	25	3	1	2
Tennessee	15	5	11	23	10	15	23	5	11	1	2	4
Alabama	16	9	21	35	42	42	4	9	3	1	0	1
Mississippi [3]	8	9	11	8			8			0	1	1
WEST SOUTH CENTRAL												
Arkansas	3	7	9	25	20	60	3	6	8	0	0	0
Louisiana	3	8	9		130	3	47		1	1	0	0
Oklahoma	10	9	11	52	24	41		4	4	0	1	1
Texas	18	30	43	1,007	1,286	837	33	42	27	2	3	5
MOUNTAIN												
Montana	2	0	0	25	9	6	91	12	12	1	0	0
Idaho	0	1	0	4	21	1	4	1	8	0	1	0
Wyoming	0	2	0		5	18	12	6	7	1	0	0
Colorado	5	3	4	39	32	32	17	6	7	0	1	1
New Mexico	0	3	3			2		27	3	0	1	1
Arizona	0	4	2	65	101	70	3	4	4	0	0	0
Utah [3]	3	0	0	11	1	1	8	11	11	0	0	0
Nevada	0	1	0							0	0	0
PACIFIC												
Washington	0	8	6			1	21	16	16	2	0	1
Oregon	2	1	2	19	6	9	14	20	20	0	2	0
California	20	19	34	6	19	23	138	105	105	6	11	8
Total	380	396	399	2,167	2,404	2,404	2,338	1,682	1,936	58	74	93
47 weeks	10,891	14,462	13,851	320,758	209,166	98,408	198,098	651,631	566,993	3,128	[4] 5,332	7,395
Seasonal low week [4]	(27th) July 5–11			(30th) July 26–Aug. 1			(35th) Aug. 30–Sept. 5			(37th) Sept. 13–19		
Total since low	4,594	5,834	6,448	19,245	18,960	18,335	12,596	11,546	13,291	487	666	900

[1] New York City only.
[2] Philadelphia only.
[3] Period ended earlier than Saturday.
[4] Dates between which the approximate low week ends. The specific date will vary from year to year.

Telegraphic morbidity reports from State health officers for the week ended Nov. 22, 1947, and comparison with corresponding week of 1946 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median 1942-46	Week ended—		Median 1942-46	Week ended—		Median 1942-46	Week ended—		Median 1942-46
	Nov. 22, 1947	Nov. 23, 1946		Nov. 22, 1947	Nov. 23, 1946		Nov. 22, 1947	Nov. 23, 1946		Nov. 22, 1947 [5]	Nov. 23, 1946	
NEW ENGLAND												
Maine	1	0	0	23	49	30	0	0	0	0	0	0
New Hampshire	0	4	0	1	1	5	0	0	0	0	0	0
Vermont	2	4	1	2	3	6	0	0	0	0	0	0
Massachusetts	0	12	4	93	73	158	0	0	0	1	4	1
Rhode Island	0	1	0	2	14	5	0	0	0	0	0	0
Connecticut	1	1	3	28	20	24	0	0	0	0	1	0
MIDDLE ATLANTIC												
New York	31	32	18	169	212	212	0	0	0	3	7	3
New Jersey	7	6	3	51	66	62	0	0	0	0	1	1
Pennsylvania	5	6	3	107	118	158	0	0	0	2	2	2
EAST NORTH CENTRAL												
Ohio	29	14	9	211	247	247	0	2	0	3	3	3
Indiana	8	14	1	73	82	59	0	0	1	2	2	1
Illinois	11	37	10	68	126	147	0	0	0	0	1	2
Michigan [3]	5	33	6	74	129	139	0	0	0	3	0	1
Wisconsin	1	23	4	43	83	83	0	0	0	0	1	1
WEST NORTH CENTRAL												
Minnesota	5	7	4	58	25	38	0	0	0	0	0	0
Iowa	0	20	2	24	23	52	0	0	0	0	1	0
Missouri	6	14	3	30	26	43	0	1	0	4	0	0
North Dakota	0	2	0	14	1	6	0	0	0	0	0	0
South Dakota	3	3	0	12	11	11	1	0	0	0	1	0
Nebraska	0	8	2	12	26	27	0	0	0	0	0	0
Kansas	1	12	2	30	32	68	0	0	0	0	2	2
SOUTH ATLANTIC												
Delaware	1	2	0	3	6	4	0	0	0	0	1	0
Maryland [3]	3	3	1	12	19	38	0	0	0	3	2	0
District of Columbia	0	1	0	6	6	21	0	0	0	1	1	1
Virginia	2	6	2	37	47	57	0	0	0	6	1	3
West Virginia	4	2	2	49	48	65	1	0	0	0	0	1
North Carolina	10	0	1	46	22	95	0	0	0	0	0	0
South Carolina	2	0	0	9	13	9	0	0	0	0	1	1
Georgia	6	3	0	15	13	40	0	0	0	1	0	0
Florida	2	3	1	9	10	10	0	1	0	1	0	2
EAST SOUTH CENTRAL												
Kentucky	1	0	0	42	52	52	0	0	0	1	3	3
Tennessee	8	3	3	32	26	79	0	1	0	3	2	2
Alabama	1	2	0	15	14	19	0	0	0	0	0	1
Mississippi [3]	4	2	2	7	9	17	0	0	0	2	0	0
WEST SOUTH CENTRAL												
Arkansas	0	8	0	6	5	15	0	0	0	0	1	1
Louisiana	4	3	1	3	4	7	0	0	0	2	2	2
Oklahoma	1	6	1	10	12	21	0	0	0	1	0	0
Texas	2	20	9	45	48	75	0	0	0	11	5	7
MOUNTAIN												
Montana	1	3	2	30	11	14	0	0	0	0	0	1
Idaho	24	2	0	9	8	8	0	0	0	0	0	0
Wyoming	0	0	0	6	1	3	0	0	0	0	0	0
Colorado	3	6	1	29	29	29	0	0	0	0	0	1
New Mexico	0	1	1	5	7	7	0	0	0	0	0	1
Arizona	2	0	0	6	8	8	0	0	0	2	0	0
Utah [3]	0	0	1	4	14	17	0	0	0	0	0	0
Nevada	0	1	0	0	1	1	0	0	0	0	0	0
PACIFIC												
Washington	4	11	7	57	39	39	0	0	0	0	0	1
Oregon	2	3	3	24	29	29	0	0	0	1	1	0
California	26	22	22	80	143	201	0	0	0	6	4	2
Total	229	366	174	1,721	2,011	2,595	2	5	8	59	50	66
47 weeks	10,300	24,261	13,102	74,613	102,994	124,926	155	324	358	3,618	3,785	5,100
Seasonal low week [4]	(11th) Mar. 15-21			(32nd) Aug. 9-15			(35th) Aug. 30-Sept. 5			(11th) Mar. 15-21		
Total since low	9,688	23,794	12,705	12,510	16,699	25,163	8	45	51	3,133	3,310	4,284

[3] Period ended earlier than Saturday.
[4] Dates between which the approximate low week ends. The specific date will vary from year to year.
[5] Including paratyphoid fever reported separately as follows: Ohio 1; Maryland 1; Virginia 2; Louisiana 1; Oklahoma 1; California 2.

Telegraphic morbidity reports from State health officers for the week ended Nov. 22, 1947, and comparison with corresponding week of 1946 and 5-year median—Con.

Division and State	Whooping cough			Week ended Nov. 22, 1947							
	Week ended—		Median 1942–46	Dysentery			Encephalitis, infectious	Rocky Mt. spotted fever	Tularemia	Typhus fever, endemic	Undulant fever
	Nov. 22, 1947	Nov. 23, 1946		Amebic	Bacillary	Unspecified					
NEW ENGLAND											
Maine	36	16	16								
New Hampshire		8	2								
Vermont	41	25	31								2
Massachusetts	182	156	150		5						1
Rhode Island	14	45	26								
Connecticut	93	64	64								1
MIDDLE ATLANTIC											
New York	225	269	284	7	3		2				4
New Jersey	187	175	140	4							1
Pennsylvania	157	192	192	1						1	6
EAST NORTH CENTRAL											
Ohio	229	89	133								
Indiana	72	31	18				1		1		1
Illinois	98	93	132	2			2		1		10
Michigan [1]	130	226	222	3						1	5
Wisconsin	146	177	172	1							3
WEST NORTH CENTRAL											
Minnesota	89	6	26				2				8
Iowa	23	14	12	1					1		12
Missouri	20	30	16			3					1
North Dakota	36	2	5			1	1				
South Dakota	10		3								1
Nebraska	19	8	8	1							
Kansas	24	3	32						1		1
SOUTH ATLANTIC											
Delaware	1	8	8								
Maryland [1]	109	33	53			1			1		1
District of Columbia	14	10	5								
Virginia	63	42	42			16			1		
West Virginia	5	15	17								1
North Carolina	26	17	64		1		1	4	3	1	
South Carolina	85	38	38	2	7						1
Georgia	12	13	5		2					1	
Florida	5	6	6	1		1				14	
EAST SOUTH CENTRAL											
Kentucky	11	13	20							2	
Tennessee	33	19	25						2	1	2
Alabama	32	19	19						1		1
Mississippi [1]	2								3		1
WEST SOUTH CENTRAL											
Arkansas	12	22	10	12					1		
Louisiana	1	5	4	1							2
Oklahoma	14		5	3					1		1
Texas	164	119	119	2	314	33				8	4
MOUNTAIN											
Montana	9	1	15								
Idaho	6	1	3								
Wyoming	5	4	1						2		
Colorado	59	6	23	1	2						6
New Mexico	14	4	4			1					
Arizona	22	15	4			25					
Utah [1]	15	5	6						1		
Nevada											
PACIFIC											
Washington	20	7	28								
Oregon	13	7	7	1							1
California	124	53	112	4	13		1		1		4
Total	2,707	2,111	2,184	47	347	81	10	4	21	29	82
Same week, 1946	2,111			66	335	146	9	0	27	45	108
Median, 1942–46	2,184			37	335	94	9	2	14	106	[6] 82
47 weeks: 1947	141,221			2,698	14,604	8,890	599	548	1,256	1,816	5,595
1946	89,685			2,231	14,969	5,931	583	564	861	3,165	4,824
Median, 1942–46	113,691			1,777	15,802	7,007	587	453	724	4,064	[6] 4,669

[1] Period ended earlier than Saturday.

[6] 2-year average, 1945–46.

Anthrax: Oklahoma 1 case.

Alaska: Week ended November 15, 1947—influenza 2, septic sore throat 3, pneumonia 2; week ended November 22—chickenpox 3, measles 1, diphtheria 1, scarlet fever 1, influenza 1, septic sore throat 6.

Territory of Hawaii, week ended November 22, 1947: Diphtheria 1, leprosy 2, measles 1, scarlet fever 1, endemic typhus fever 1, whooping cough 21.

WEEKLY REPORTS FROM CITIES [1]

City reports for week ended Nov. 15, 1947

This table lists the reports from 89 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	------	0	-------	0	0	0	4	0	0	13
New Hampshire:												
Concord	0	0	------	0	-------	0	0	0	0	0	0	------
Vermont:												
Barre	0	0	------	0	-------	0	0	0	0	0	0	------
Massachusetts:												
Boston	4	0	------	0	23	0	14	1	19	0	0	13
Fall River	0	0	------	0	1	0	0	0	0	0	0	3
Springfield	0	0	------	0	-------	0	0	0	3	0	0	10
Worcester	0	0	------	0	-------	0	6	0	6	0	0	9
Rhode Island:												
Providence	0	0	1	0	-------	1	1	0	1	0	0	4
Connecticut:												
Bridgeport	0	0	------	0	-------	0	0	0	0	0	1	2
Hartford	0	0	------	0	-------	0	0	0	0	0	0	5
New Haven	0	0	------	0	-------	0	1	0	2	0	0	4
MIDDLE ATLANTIC												
New York:												
Buffalo	2	0	------	0	1	0	5	2	6	0	0	12
New York	10	0	------	0	53	1	50	7	34	0	2	49
Rochester	1	0	------	0	-------	0	1	8	5	0	0	14
Syracuse	0	0	------	0	-------	0	0	2	2	0	0	17
New Jersey:												
Camden	1	0	1	0	-------	0	0	0	3	0	0	------
Newark	0	0	------	0	4	0	1	0	6	0	0	6
Trenton	2	0	------	0	-------	0	0	0	1	0	1	------
Pennsylvania:												
Philadelphia	1	1	3	1	5	0	15	1	18	0	0	25
Pittsburgh	1	0	------	0	1	1	8	0	5	0	0	12
Reading	0	0	------	0	4	0	1	0	0	0	0	1
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	3	0	------	0	1	1	3	6	10	0	0	2
Cleveland	1	0	------	0	1	1	8	9	14	0	1	42
Columbus	4	0	------	0	12	0	2	0	6	0	1	20
Indiana:												
Fort Wayne	0	0	------	0	-------	0	4	0	2	0	0	------
Indianapolis	1	0	------	0	-------	0	2	1	6	0	0	11
South Bend	0	0	------	0	-------	0	0	0	1	0	0	------
Terre Haute	0	0	------	0	-------	0	0	0	0	0	0	------
Illinois:												
Chicago	2	0	3	1	62	2	20	6	16	0	1	19
Michigan:												
Detroit	1	0	1	0	12	0	4	3	17	0	0	65
Flint	0	0	------	0	1	0	2	1	4	0	0	2
Grand Rapids	0	0	------	0	16	0	2	0	5	0	0	14
Wisconsin:												
Kenosha	0	0	------	0	2	0	0	0	0	0	0	5
Milwaukee	0	0	------	0	3	0	4	0	1	0	0	16
Racine	0	0	------	0	-------	0	0	0	2	0	0	4
Superior	0	0	------	0	-------	0	0	0	3	0	0	6
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	------	0	2	0	1	0	3	0	0	19
Minneapolis	0	0	------	0	85	0	1	0	15	0	0	8
St. Paul	0	0	------	0	1	1	2	0	6	0	0	26
Missouri:												
Kansas City	0	0	6	0	1	0	3	1	2	0	0	3
St. Joseph	0	0	------	0	-------	0	0	0	0	0	1	1
St. Louis	2	0	1	0	-------	0	8	1	6	0	1	3

[1] In some instances the figures include nonresident cases.

City reports for week ended Nov. 15, 1947—Continued

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
North Dakota:												
Fargo	0	0	-----	0	7	0	1	0	1	0	0	1
Nebraska:												
Omaha	0	0	-----	0	-----	1	2	1	2	0	0	-----
Kansas:												
Topeka	0	0	-----	0	-----	0	0	0	3	0	0	-----
Wichita	0	0	-----	0	-----	0	2	0	3	0	0	-----
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	-----	0	1	0	1	1	0	0	0	2
Maryland:												
Baltimore	0	0	1	0	1	1	5	0	6	0	0	51
Cumberland	3	0	-----	0	-----	0	1	0	0	0	0	1
Frederick	0	0	-----	0	-----	0	0	0	0	0	0	-----
District of Columbia:												
Washington	0	0	-----	0	2	0	6	1	11	0	1	12
Virginia:												
Lynchburg	0	0	-----	0	-----	0	0	0	1	0	0	2
Richmond	1	0	-----	0	-----	0	2	0	4	0	0	4
Roanoke	0	0	-----	0	-----	0	0	0	0	0	0	-----
West Virginia:												
Charleston	0	0	-----	0	4	0	0	0	0	0	0	-----
Wheeling	0	0	-----	0	-----	0	0	0	1	0	0	-----
North Carolina:												
Raleigh	0	0	-----	0	-----	0	0	0	0	0	0	1
Wilmington	1	0	-----	0	-----	0	1	0	0	0	0	-----
Winston-Salem	0	0	-----	0	-----	0	1	0	1	0	0	-----
South Carolina:												
Charleston	3	0	13	0	-----	0	0	0	0	0	0	-----
Georgia:												
Atlanta	2	0	-----	0	-----	0	3	0	4	0	0	1
Brunswick	0	0	-----	0	-----	0	0	0	0	0	0	-----
Savannah	0	0	-----	0	-----	0	0	0	2	0	0	2
Florida:												
Tampa	0	0	-----	0	2	0	0	0	2	0	0	1
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	0	0	-----	0	3	0	8	2	6	0	0	4
Nashville	0	0	-----	0	-----	0	4	1	0	0	0	1
Alabama:												
Birmingham	0	0	-----	0	1	0	1	0	0	0	0	-----
Mobile	0	0	-----	0	-----	0	1	0	3	0	0	-----
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	-----	0	-----	0	0	0	0	0	0	-----
Louisiana:												
New Orleans	3	0	-----	0	2	0	6	2	3	0	0	4
Shreveport	0	0	-----	0	-----	0	4	0	0	0	0	-----
Oklahoma:												
Oklahoma City	0	0	1	0	-----	1	2	0	0	0	0	-----
Texas:												
Dallas	1	0	-----	0	-----	0	2	0	2	0	0	3
Galveston	0	0	-----	0	-----	0	2	0	0	0	0	-----
Houston	0	0	-----	0	4	0	3	1	1	0	0	-----
San Antonio	0	0	-----	0	-----	0	4	0	0	0	0	-----
MOUNTAIN												
Montana:												
Billings	0	0	-----	0	23	0	0	0	0	0	0	1
Great Falls	0	0	-----	0	-----	0	0	0	0	0	0	-----
Helena	0	0	-----	0	-----	0	1	0	0	0	0	-----
Missoula	0	0	-----	0	-----	0	0	0	0	0	0	-----
Colorado:												
Denver	3	0	1	0	12	1	4	0	7	0	0	23
Pueblo	0	0	-----	0	-----	0	1	1	1	0	0	14
Utah:												
Salt Lake City	0	0	-----	0	4	0	2	0	2	0	0	2

City reports for week ended Nov. 15, 1947—Continued

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle	0	0	------	0	1	0	5	1	5	0	0	7
Spokane	0	0	------	0	3	0	2	0	0	0	0	1
Tacoma	0	0	------	0	------	0	0	0	5	0	1	------
California:												
Los Angeles	2	0	1	0	8	0	4	2	10	0	0	13
Sacramento	0	0	------	0	4	0	0	0	8	0	0	2
San Francisco	0	0	------	0	33	0	3	0	7	0	0	8
Total	55	1	33	2	406	12	253	62	335	0	11	626
Corresponding week, 1946[1]	93	------	43	13	356	------	311	------	444	2	11	652
Average 1942–46[1]	88	------	97	[2]17	[3]527	------	[2]315	------	689	0	14	684

[1] Exclusive of Oklahoma City.
[2] 3-year average, 1944–46.
[3] 5-year median, 1942–46.

Dysentery, amebic.—Cases: New York 7; Philadelphia 1; Chicago 2; New Orleans 1; Los Angeles 2.
Dysentery, bacillary.—Cases: Los Angeles 1.
Dysentery, unspecified.—Cases: Baltimore 2.
Typhus fever, endemic.—Cases: New Orleans 1.

Rates (annual basis) per 100,000 population, by geographic groups, for the 89 cities in the preceding table (latest available estimated population, 34,533,300)

	Diphtheria cases rates	Encephalitis, infectious case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	10.5	0.0	2.6	0.0	63	2.6	57.5	2.6	91	0.0	2.6	165
Middle Atlantic	8.3	0.5	1.9	0.5	31	0.9	37.5	9.3	37	0.0	1.4	63
East North Central	7.4	0.0	2.5	0.6	67	2.5	31.3	15.9	53	0.0	1.8	126
West North Central	4.0	0.0	13.9	0.0	191	4.0	39.8	6.0	82	0.0	4.0	121
South Atlantic	16.3	0.0	22.9	0.0	16	1.6	32.7	3.3	52	0.0	1.6	126
East South Central	0.0	0.0	0.0	0.0	24	0.0	82.6	17.7	53	0.0	0.0	30
West South Central	10.2	0.0	2.5	0.0	15	2.5	58.4	7.6	15	0.0	0.0	18
Mountain	24.8	0.0	8.3	0.0	322	8.3	66.1	8.3	83	0.0	0.0	330
Pacific	3.2	0.0	1.6	0.0	77	0.0	22.1	4.7	55	0.0	1.6	49
Total	8.3	0.2	5.0	0.3	61	1.8	38.3	9.4	51	0.0	1.7	95

PLAGUE INFECTION IN MODOC COUNTY, CALIF.

Under date of November 17, plague infection was reported proved in tissue from 4 woodrats (*Neotoma* sp.) collected on June 25 from a ranch 4 miles south and 9 miles east of Alturas, Modoc County, Calif.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended November 1, 1947.—During the week ended November 1, 1947, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		1		98	155	49	47	63	114	527
Diphtheria				18	3		2	3		26
Encephalitis, infectious						2	1			3
German measles		2		4	9		3		2	20
Influenza		7			6	4				17
Measles		2		196	80	29	18	7	68	400
Meningitis, meningococcus					4	1				5
Mumps		33	2	46	89	37	15	30	21	273
Poliomyelitis		2		1	23	5	4	3	5	43
Scarlet fever	1	4	14	43	40	4	4	2	5	117
Tuberculosis (all forms)			5	136	23	25	12	51	22	274
Typhoid and paratyphoid fever				8	2					10
Undulant fever					2			1		3
Venereal diseases:										
Gonorrhea	3	15	9	119	119	40	18	40	99	462
Syphilis	3	18	2	125	58	18	13	12	30	279
Other forms									11	11
Whooping cough				42	51	38	13	22	25	191

JAMAICA

Notifiable diseases—5 weeks ended November 1, 1947.—During the 5 weeks ended November 1, 1947, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox	3	9	Leprosy		1
Diphtheria	1	3	Puerperal sepsis		1
Dysentery, unspecified	2	2	Tuberculosis	59	79
Erysipelas	1	2	Typhoid fever	15	186

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual incidence, only those places are included which had not previously reported any of the above-mentioned diseases, except yellow fever, during recent months. All reports of yellow fever are published currently.

A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

Plague

Ecuador—Loja Province.—For the month of October 1947, 8 cases of plague with 1 death were reported in Loja Province, Ecuador, distributed as follows: Sabiango, Macara, 6 cases, 1 death; Sozoranga, 2 cases.

Smallpox

Ecuador.—For the month of October 1947, 584 cases of smallpox with 5 deaths were reported in all of Ecuador. For the week ended November 8, 1947, 22 cases of smallpox (alastrim) were reported in Guayaquil.

Typhus Fever

Guatemala.—For the month of September 1947, 42 cases of typus fever with 6 deaths were reported in Guatemala.

DEATHS DURING WEEK ENDED NOVEMBER 15, 1947

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

	Week ended Nov. 15, 1947	Corresponding week, 1946
Data for 93 large cities of the United States:		
Total deaths	9,342	8,691
Median for 3 prior years	8,836	
Total deaths, first 46 weeks of year	421,332	414,559
Deaths under 1 year of age	721	724
Median for 3 prior years	616	
Deaths under 1 year of age, first 46 weeks of year	33,884	30,423
Data from industrial insurance companies:		
Policies in force	67,065,060	67,319,596
Number of death claims	10,320	10,014
Death claims per 1,000 policies in force, annual rate	8.0	7.8
Death claims per 1,000 policies, first 46 weeks of year, annual rate	9.2	9.4

NOTIFIABLE DISEASES, THIRD QUARTER, 1947 [1]

The figures in the following table are the totals of the monthly morbidity reports received from the State health authorities for July, August, and September, 1947. These reports are preliminary and the figures are therefore more or less incomplete and subject to correction by final reports. In most instances they include cases reported in both civilian and military populations. The comparisons made are with similar preliminary reports; but, owing to population shifts in many States since the 1940 census, the figures for some States may not be comparable with those for prior years, especially for certain diseases. Each State health officer has been requested to include in the monthly report for his State all diseases that are required by law or regulation to be reported in the State, although some do not do so. The list of diseases required to be reported are not the same for each State. Only 11 of the common communicable diseases are notifiable in all the States. In some instances cases are reported, in some States, of diseases that are not required by law or regulation to be reported and the figures are included although manifestly incomplete. There are also variations among the States in the degree of, and checks on, the completeness of reporting of cases of the notifiable diseases; therefore, comparisons as between States may not be justified for certain diseases. As compared with the deaths, incomplete case reports are obvious for such diseases as malaria, pellagra, pneumonia, and tuberculosis, while in many States other diseases, such as puerperal septicemia, rheumatic fever, and Vincent's infection, are not reportable.

In spite of these known deficiencies, however, these monthly reports, which are published quarterly and annually in consolidated form, have proved of value in presenting early information regarding the reported incidence of a large group of diseases and in indicating trends by providing a comparison with similar preliminary figures for prior years. The table gives a general picture of the geographic prevalence of certain diseases, as the States are arranged by geographic areas.

Leaders are used in the table to indicate that no case of the disease was reported.

Consolidated monthly State morbidity reports for July, August, and September 1947

Division and State	Anthrax	Chickenpox	Conjunctivitis [2]	Diphtheria*	Dysentery, amebic	Dysentery, bacillary	Dysentery, undefined	Encephalitis, infectious	German measles	Hookworm disease	Influenza	Malaria [3]	Measles*	Meningitis, meningococcus*	Mumps	Ophthalmia [4]	Pellagra	Pneumonia, all forms
NEW ENGLAND																		
Maine		188		5				1	35		9	2	65	7	127			110
New Hampshire		31		2		1			12		5	1	14	1	12			5
Vermont		114		1					27				223	1	77			7
Massachusetts		966	64	47	1	33		4	135			29	810	11	664	88		[5] 215
Rhode Island		33		7	1	5			1		6	3	100	6	12			24
Connecticut		283		12	5			3	34		14	14	690	9	209			288
MIDDLE ATLANTIC																		
New York	3	1,610		100	87	52		16	[6] 177	[6] 14	[6] 22	61	2,223	53	[6] 982	20		1,406
New Jersey	1	909		14	7	2	1	1	210		23	15	987	18	1,885	3		427
Pennsylvania	4	679		87	1	15		3			10		586	43	1,516	4	2	524
EAST NORTH CENTRAL																		
Ohio		512		81	6	1	10		73		16	5	1,462	23	515	128		369
Indiana		69		38		3	3	9	2		57	12	215	8	41			54
Illinois		629	64	20	56	16		23	103		20	56	1,016	34	772			602
Michigan		763	22	23	37	8		3	141	1	5	38	821	26	585	2		285
Wisconsin		1,488		11				1	303		92	19	1,938	15	953	2		[5] 37
WEST NORTH CENTRAL																		
Minnesota		140		74	9	3		13		3	4	61	626	11				

Michigan		703	22	23	5	3		1	303		92	19	1,938	15	953	2		37
Wisconsin		1,488		11														
WEST NORTH CENTRAL																		
Minnesota		140		74	9	3		13		3	4	61	636	11				22
Iowa		112		26	3			17	2		1	6	375	9	44			3
Missouri		44		21			4	3	2		5	29	260	21	76			160
North Dakota		19	3	10	5			78			1	1	151	1				42
South Dakota		11		11				2				2	105		24			1
Nebraska		65		7	12			10			17	4	68	2	28			20
Kansas		61	7	56	1	1		12	10		7	5	90	4	111		2	80
SOUTH ATLANTIC																		
Delaware		6		1		1							14	1	12			1
Maryland		167		53	1	3	4		30		6	3	85	7	284	2		147
Dist. of Columbia		58		1	2	1					1	2	33	3	121			124
Virginia		151		30	1		1,578	2			1,433	19	512	21	112		7	219
West Virginia		30		31		2			24		92	1	265	11	63	1	1	65
North Carolina				172	6			1				66	174	19				
South Carolina		139		72	21	175		6	125	459	1,921	2,149	279	5	187	8	214	515
Georgia		198	22	66	6	35	4			739	42	45	120	9	51		4	90
Florida		32	35	62	9		5	2	8	703	54	52	91	8	72	11	3	97
EAST SOUTH CENTRAL																		
Kentucky		20		40	3	6		2	8		1	31	28	18	39		1	88
Tennessee		38	1	64	8	18	5	6	11	4	88	108	79	17	54	2	20	295
Alabama		20		51	3			2	4		140	1,027	195	22	68		4	214
Mississippi		8		100	24	28		1		314	26	374	25	6	64	12	5	103
WEST SOUTH CENTRAL																		
Arkansas	5	49	1	41	90	46	75		4	7	24	646	110	5	63	1	11	84
Louisiana		10		36	103	15		2	3	20	14	59	87	17	21		1	363
Oklahoma		26		24	25	5	21	4	12	20	166	185	24	12	84	2	5	97
Texas	1	525		223	217	3,671	484	2			2,775	1,912	849	47	1,688	21	115	661
MOUNTAIN																		
Montana		118		8		3		9	28		30		238	9	193			4
Idaho		70	9	6	1	1			16		95	2	34	2	114			3
Wyoming		37		2	2		1	1	9		5		13	3	6			1
Colorado		289		69		5		12	27		75	2	163	11	237			94
New Mexico		32		4	2	11	16	3	4		7	2	49	1	32			116
Arizona		53		19	1		228	1	20		160	9	71	1	69	1	1	112
Utah		292		7			1		30		1	9	64	1	290			26
Nevada		6	2			4		1			6		7		13			4
PACIFIC																		
Washington		461	9	46	4	1	34	1	100		15	3	136	6	296			108
Oregon		136	7	17	8	1	2	2		2	32	7	111	10	110			126
California	1	1,724	9	141	44	40		70	421		58	50	909	47	1,993			[4] 223
Total	15	13,421	255	2,039	812	4,212	2,476	329	2,151	2,286	7,581	7,126	17,600	622	14,969	308	396	8,744
Third quarter 1946	2	12,291	133	3,085	1,174	5,800	1,930	289	2,329	3,641	13,191	15,899	30,319	829	14,634	335	1,007	14,745
Median 1942-46	17	12,291	132	3,085	1,044	11,715	4,396	275	2,329	3,641	12,515	23,831	21,471	1,283	15,677	337	1,303	14,409
Alaska		57		1							120		4		4			19
Hawaii Territory		170		3	1	25		1	61	1	18	[3] 2	11	1	282			[5] 15
Panama Canal Zone [1]		31		45	5	20						137	8		3			[6] 53

See footnotes on p. 1756

Consolidated monthly State morbidity reports for July, August, and September 1947—Continued

Division and State	Poliomyelitis*	Rabies in man	Rheumatic fever	Rocky Mountain spotted fever	Scarlet fever*	Septic sore throat	Smallpox*	Tetanus	Trachoma	Trichinosis	Tuberculosis, all forms*	Tuberculosis, respiratory	Tularemia	Typhoid fever*	Paratyphoid fever	Typhus fever endemic	Undulant fever*	Vincent's infection	Whooping cough*
NEW ENGLAND																			
Maine	29				62	3		2			142	138		3	2		9	5	255
New Hampshire	19				28	13		1		1	40			4			4	11	48
Vermont	17				12	1					16			4	1		33		317
Massachusetts	250			3	324	9		6	2	14	692	651	4	4	58		23		1,672
Rhode Island	127		16		29	2				1	114	107		3			2	4	375
Connecticut	99				50	45		3		3	276	267		1	2		45		777
MIDDLE ATLANTIC																			
New York	717			16	[10] 717	([11])		11		58	3,382	3,197		43	7	3	67		2,907
New Jersey	208			15	153	5		2		1	692			15	7		12		2,467
Pennsylvania	297		114	14	418			1			1,161		1	76	[12] 5	1	23		2,982
EAST NORTH CENTRAL																			
Ohio	945	1	10	6	636	9		5		4	2,112		1	47	5	2	35		4,328
Indiana	160		1	9	156	25		6			693	668	3	54	6		19	3	642
Illinois	624		45	15	262	20		9	1		2,009	1,871	18	27	4		167	28	1,675
Michigan	436		79		389	73		8	1	1	1,793			31	[12] 20	1	79		3,109
Wisconsin	136				167	4			1		979		3	11			143		2,434
WEST NORTH CENTRAL																			
Minnesota	175		25		147	83	1	2	2		552		3	4	[12] 14		92	12	1,195
Iowa	96		1	2	105	2		1			148		5	13	2		360		387
Missouri	68		5	5	73	22	2				1,143		33	34	3		50		520
North Dakota	50		2		38	1			5		102	80		2			2	12	78
South Dakota	8			1	19						92			6			25		56
Nebraska	131				123						140			5	2		27		162
Kansas	61				78	1		3	1		292	284	5	8	6	4	30	24	738
SOUTH ATLANTIC																			
Delaware	105			1	18						74	74		4	1		4		60
Maryland	66		29	35	99	11		2			761	738	1	16	[12] 6	1	6	1	1,161
District of Columbia	9			3	46									1	1				240
Virginia	98			42	116	635		3			1,174	1,159	15	39	17		33		1,283
West Virginia	80		3	4	99	3	1	1			543	538	1	39	1		6	1	199
North Carolina	124	2		63	105	8					821	802	22	19	3	14	8		756
South Carolina	15		140	4	37	1,614		6			127		2	53	3	23	18		1,338
Georgia	42		12	14	69	51		9			830	514	14	42	14	161	54	8	484
Florida	26				43	20		10			1,172	1,172	1	15	[12] 18	68	25	19	427
EAST SOUTH CENTRAL																			

Georgia	52																		
Florida	26				43	20		10			1,172	1,172	1	15	[12] 5	45	25	5	337
EAST SOUTH CENTRAL																			
Kentucky	66		7	23	97	8		1	23		544	530	1	97	9	1	10	1	383
Tennessee	77	5	12	17	160	133	1	10	1		1,605		14	40	8	6	24	67	440
Alabama	19			8	32			11			685		2	20		62	39		472
Mississippi	17				45		1				621	604	24	28		16	17		88
WEST SOUTH CENTRAL																			
Arkansas	45	1		3	22	318	1	10	55		500	498	73	53	2	2	24		413
Louisiana	15		26	1	25	38		15			523	503	10	41	8	43	15		103
Oklahoma	25			7	42	60		2	28		565	357	27	52	8	1	31	3	378
Texas	84			1	205	663			31		3,484		12	128	25	194	114		4,918
MOUNTAIN																			
Montana	20		3	1	55	20			40		151	149	3	10	1		1		194
Idaho	109		6	4	67	45			3		23		2	7	7		7	12	154
Wyoming	11			3	16	10	1				7		6	1			1	3	72
Colorado	32		33	1	110	80					477		2	8	2		66	3	937
New Mexico	22		3		23	2	1	1	3		[13] 367	[13] 351		14	1				193
Arizona	16				29	18			38		487	468		8	1		4		283
Utah	4		35	3	48	6					17	13	19	2			23		221
Nevada	1				8	8			2		49		1	2				21	49
PACIFIC																			
Washington	78		55		142	27		3		1	496			6	[12] 3		13	221	390
Oregon	54		14		80	35			2	1	200	186		19	2		5		158
California	322		166		496	67		23	24	4	2,310	2,157	4	57	90	9	78		2,133
Total	6,235	9	842	324	6,311	4,198	9	167	263	89	35,183	18,076	332	1,216	[12] 375	612	1,873	459	45,051
Third quarter 1946	16,856	13	841	344	8,887	1,754	33	145	372	86	29,694	16,178	266	1,349	366	1,357	1,518	557	29,216
Median 1942–46	8,275	9		257	11,912	1,574	58	145	509	48	29,694	17,263	208	[14] 1,809	[14] 281	1,770	1,227	544	34,371
Alaska						14					134	70		9				1	
Hawaii Territory	14				1	1		5			528	419		1	1	16	1		385
Panama Canal Zone [9]	15										[9] 6			2	2	3			

See footnotes on p. 1756.

FOOTNOTES FOR TABLE ON PAGES 1752 TO 1755

*Diseases marked with an asterisk (*) are reportable by law or regulation in all the States, including the District of Columbia. Typhoid fever is reportable in all the States; paratyphoid fever in all except 6 States. Syphilis is reportable in all the States and the District of Columbia but is not included in the table. Some States have increased and some have reduced the list of reportable diseases since the latest published compilation of reportable diseases (PUBLIC HEALTH REPORT 59:317-340) (Mar. 10, 1944. Reprint No. 2544).

[1] For reports for first and second quarters of 1947 see pp. 890 and 1376 of the PUBLIC HEALTH REPORTS for June 13 and September 19, 1947, respectively.

[2] Includes cases of kerato- and suppurative conjunctivitis and of pink eye.
[3] In a few States practically all cases contracted outside continental United States.
[4] Reported as ophthalmia neonatorum.
[5] Lobar pneumonia only.
[6] New York City only.
[7] Off-shipping.
[8] Includes the cities of Colon and Panama.
[9] In the Canal Zone only.
[10] Includes septic sore throat.
[11] Included in scarlet fever.
[12] Includes cases reported as salmonella infection.
[13] Includes nonresident cases.
[14] 3 year (1944-46) median.

The following list includes certain rare conditions, diseases of restricted geographical distribution, and those reportable in or reported by only a few States; last year's figures in parentheses (where no figures are given, no cases were reported last year):

Actinomycosis: Illinois 1, Minnesota 7 (1), Kansas 1.
Botulism: Tennessee 2, Montana 1.
Coccidioidomycosis: California 10 (7).
Colorado tick fever: Wyoming 1, Colorado 4.
Dengue: South Carolina 4 (1), Texas 5 (4).
Dermatitis: New Hampshire 7, Missouri 20, Arkansas 3.
Diarrhea: New York 82 (29), New Jersey 4 (19), Pennsylvania 77 (1), Ohio 382 (383) includes enteritis, Indiana 4, Illinois 18 (48), Michigan 11 (1), North Dakota 1, Maryland 8 (25), South Carolina 3,267 (2,484), Florida 16 (15), Kentucky 38, New Mexico 32, Oregon 4 (5), includes enteritis, California 25 (11).
Dog bite: New Hampshire 3, Illinois 4,504 (4,080), Michigan 3,129 (2,646), Arkansas 151 (133).
Encephalitis, equine: Montana 1.
Favus: Kentucky 3.
Food poisoning: New Hampshire 4, New Jersey 13 (4), Ohio 8, Indiana 14 (3), Illinois 6 (4), Minnesota 70, Kentucky 2, Louisiana 6 (6), Oklahoma 8, Colorado 4, New Mexico 4 (2), Washington 35 (15), Oregon 2 (3), California 665 (30).
Glanders (correction): The case of glanders in Indiana as published on page 1376 of the PUBLIC HEALTH REPORTS for September 19, 1947, is in error. No case of glanders has occurred in Indiana.
Granuloma (unspecified): Kentucky 1.
Granuloma inguinale: Missouri 4 (3), Florida 71 (63), Tennessee 27 (30), Mississippi 85 (150), Louisiana 47 (73).
Impetigo contagiosa: Ohio 2 (12), Indiana 27 (19), Illinois 11 (17), Michigan 278 (200). Missouri 30, Kansas 28 (16), Maryland 7, Montana 6 (13), Idaho 20 (25), Wyoming 2 (11), Colorado 2 (3), Nevada 26 (48), Washington 99 (179), Hawaii Territory 15 (7).
Jaundice (including hepatitis and Weil's disease): Maine 9 (1), Rhode Island 1, New York 144 (67), Pennsylvania 16 (4), Ohio 1, Illinois 4 (11), Michigan 1 (7), Minnesota 1 (20), Maryland 2 (3), Florida 8 (4), Kentucky 1, Tennessee 7 (2), Idaho 8 (11), Washington 9, Oregon 17 (15), California 47 (69), Hawaii Territory 1.
Lead poisoning: New Hampshire 1.
Leprosy: New York 1 (1), Arkansas 1, Louisiana 2 (2), Texas 4 (6), California 2, Hawaii Territory 8 (9).
Lymphocytic choriomeningitis: Massachusetts 1 (2), Tennessee 2 (6).
Lymphogranuloma venereum: Missouri 5 (9), Florida 35 (66), Tennessee 27 (32), Louisiana 30 (24).
Psittacosis: Michigan 2, California 2.
Puerperal septicemia: Florida 1 (1), Tennessee 1 (3), New Mexico 2 (1).
Rabies in animals: New York 154 (320), Ohio 160 (254), Illinois 48 (89), Michigan 70, Kansas 19 (2), Maryland 1 (2), South Carolina 43 (34), Florida 115 (7), Alabama 91 (135), Arkansas 23 (36), Louisiana 2 (11), Texas 247 (229), Colorado 2 (2), New Mexico 1, California 42 (72).
Rat bite fever: Indiana 1.
Relapsing fever: Texas 34 (1), Nevada 1 (2), California 17 (8).
Ringworm: Pennsylvania 85 (116), Ohio 5 (17), Illinois 75 (113), Michigan 163 (125), Minnesota 9 (81), Missouri 4 (1), Kentucky 5, Idaho 14 (30), Utah 16, Nevada 4, Washington 134 (91).
Scabies: Rhode Island 1, Pennsylvania 55 (103), Michigan 128 (123), Missouri 12 (3), South Dakota 2, Kansas 7 (10), Kentucky 8, Montana 2 (9), Idaho 31 (12), Nevada 4 (30).
Silicosis: Arkansas 3, New Mexico 2 (2).

FEDERAL SECURITY AGENCY

UNITED STATES PUBLIC HEALTH SERVICE

THOMAS PARRAN, *Surgeon General*

DIVISION OF PUBLIC HEALTH METHODS

G. ST. J. PERROTT, *Chief of Division*

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